

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of)	
)	
IP-Enabled Services)	WC Docket No. 04-36
)	
E911 Requirements for IP-Enabled Service Providers)	WC Docket No. 05-196
)	
)	

REPLY COMMENTS OF SKYPE COMMUNICATIONS, S.A.

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I. INTRODUCTION AND SUMMARY

There is broad consensus that the Commission should first assess the impact of its current E911 rules for interconnected VoIP service providers before evaluating whether to extend new rules to Skype. This does *not* mean the pace of industry developments to protect public safety interests will slow or stop. Recent events along the Gulf Coast make clear that the nation's communications and emergency services network will continue to be challenged and sometimes will not wait for regulatory or industry solutions. For its part, Skype will continue to actively work with other VoIP providers, public safety entities, and the Commission to enable a next-generation E911 system that meets the expectations of our users, the public safety community, and the FCC.¹

II. THE RECORD DEMONSTRATES THAT EXPANDED E911 REQUIREMENTS ARE NOT WARRANTED

The record in this proceeding shows that the Commission should first assess the impact and effectiveness of its recently-adopted rules for interconnected VoIP before extending E911 requirements to different VoIP applications such as SkypeOut and/or SkypeIn.² Commenting parties make clear that premature imposition of E911 rules could

¹ In the wake of Hurricane Katrina, Skype partnered with Khalos Labs to use the global reach of the Skype VoIP network to create a one stop Katrina help line where victims in Katrina's path and Skype users from around the world can connect, coordinate, and communicate for rescue recovery and relief. Skype has set up a local Louisiana phone number and Skype address (504-208-1564 and Skype:KatrinaHelp) where users can connect victims with families around the globe and rescue efforts on the ground, donate Skype credits to charities working to aid displaced families, and even connect to affected areas via ham radio. *See* katrina.internet2.edu/wiki/helpline.html.

² *See, e.g.,* Comments of AT&T Corp. at 6 (Aug. 15, 2005) ("AT&T Comments"); Comments of BellSouth Corporation at 3 (Aug. 15, 2005) ("BellSouth Comments"); Comments of National Association of State Utility Consumer Advocates at 16 (Aug. 15, 2005) ("NASUCA Comments"); Comments of Qwest Communications Corporation at 1-2 (Aug. 15, 2005) ("Qwest Comments"); Comments of SBC Communications, Inc. at 2-4, 10 (Aug. 15, 2005) ("SBC Comments"); Comments of Verizon at 3 (Aug. 15, 2005) ("Verizon Comments").

stifle innovation, broadband deployment and competition in voice services.³ In the *Order*, the Commission properly recognized that the current wireline E911 network is “based on a 25-year-old architecture and implemented with legacy components that place significant limitations on the functions that can be performed over the network.”⁴ Requiring Skype services that exist largely on the broadband Internet to be backward compatible with the existing circuit-switched E911 will generate a significant drag on innovation and divert resources from the development of a next-generation solution.

A. Commenting Parties Agree That Consumer Expectations Should Be The Touchstone For Determining Whether Non-Interconnected Or Partially Interconnected VoIP Services Should Be Subject to E911 Requirements

Virtually all parties, representing nearly every segment of the telecommunications/information industry, including Bell Operating Companies, equipment manufacturers, and cable companies, as well as state regulators and others, agree that consumer expectations should determine whether non-interconnected or partially-interconnected VoIP providers should be required to provide E911 services.⁵

³ See, e.g., Comments of Center for Democracy *et al.* at 11 (Aug. 15, 2005); BellSouth Comments at 6, 9; *see also* Comment of Martin Alix at 3 (Aug. 15, 2005); Comment of Edgardo Balansay at 3 (Aug. 15, 2005).

⁴ *IP-Enabled Services*, WC Docket No. 04-36, *E911 Requirements for IP-Enabled Service Providers*, WC Docket No. 05-196, First Report and Order and Notice of Proposed Rulemaking, FCC 05-116, para. 14 (rel. June 3, 2005).

⁵ See, e.g., BellSouth Comments at 7; Comments of National Cable and Telecommunications Association at 3 (Aug. 15, 2005); Qwest Comments at 3; Comments of Texas Commission on State Emergency Communications at 6 (Aug. 15, 2005); Comments of Texas Office of Public Utility Counsel at 1-2 (Aug. 15, 2005); Comments of Time Warner, Inc. at 7 (Aug. 15, 2005) (“Time Warner Comments”); Comments of United Online, Inc. at 3-8 (Aug. 15, 2005) (“United Online Comments”); Comments of United States Telecom Association at 7 (Aug. 15, 2005) (“USTA Comments”).

A small minority of commenting parties suggest that E911 requirements should be extended to all computer applications that permit calls to be made to the PSTN.⁶ Consumer expectations, however, are the touchstone of the FCC's approach and E911 obligations should not extend to services, such as SkypeOut, that create no consumer expectation of access to emergency response services. As detailed in Skype's initial comments in this proceeding, neither SkypeOut nor SkypeIn, together or separately, bear the characteristics of a replacement telephone service.⁷

Regulations that extend E911 requirements to applications such as SkypeOut and/or SkypeIn would create consumer expectations where none exist in the marketplace and would put the Commission on a slippery slope toward the imposition of requirements for *all* services that allow consumers to communicate with others, on or off the PSTN. As form factors evolve, it is possible that traditional-looking phones will be connected as USB devices to personal computers. Thus, a consumer will increasingly be able to use traditional handsets to communicate without touching the PSTN and nuances between Internet-based services models will blur. Right now, because VoIP services are new to consumers, user expectations are within the control of VoIP providers, its competitors and this Commission to some degree. To avoid creating new expectations of E911 service — and the disastrous consequences that may ensue — the Commission should continue its current and effective policy of requiring E911 service only for fully

⁶ See Comments of Boulder Regional Emergency Telephone Service Authority at 5 (Aug. 15, 2005) (“Boulder Regional Comments”) (asking for E911 capabilities to be extended to all two-way voice services that permit calls to be terminated to the PSTN); Comments of National Emergency Number Association at 10 (Aug. 15, 2005) (“NENA Comments”) (suggesting that all VoIP services that allow calls to be made to the PSTN should have E911 capabilities).

⁷ For example, Skype offers such things as integrated instant messaging capabilities, file transfer, animated emoticons and other personalized content more akin to instant messaging services than traditional telephony products.

interconnected services that operate as a replacement for traditional telephone service.

Doing so will work to clarify the VoIP landscape for consumers and not create dangerously false consumer expectations for services such as SkypeOut and SkypeIn.⁸

Expanding the scope of the FCC's definition of "interconnected VoIP" will also raise significant technical challenges that may prove unworkable. For services such as SkypeOut that allow users to terminate traffic to the PSTN, users are "presence-based" and do not utilize traditional numbering resources. Without traditional numbering resources attached to these services, Skype cannot generate call-back information. Therefore, compliance with the Commission's recently-adopted E911 rules is technically infeasible. On the other hand, requiring one-way interconnected VoIP services to generate ANI by mandating the use of numbering resources could generate a significant drain on the number pool.⁹ An FCC rule requiring such a change would fundamentally alter the nature of Skype's applications and the software architectures that underlie those applications. The Commission should be cautious about imposing rules that require such radical surgery on a nascent business, particularly when less-onerous options are available.¹⁰

Although there is some disagreement in the record regarding whether subscribers to one-way VoIP service capable of originating calls to the PSTN would expect to have

⁸ See also Section IV *infra*, regarding Skype's best practice implementing emergency services disclaimers for its global user base.

⁹ Skype counts approximately 5.2 million registered users, approximately 1 million of whom currently subscribe to SkypeOut.

¹⁰ See Comments of Skype Communications, S.A. at 21-22 (Aug. 15, 2005) ("Skype Comments") (discussing the possibility of a call-center based O911 solution).

E911 service,¹¹ there was little dispute that subscribers to one-way service that only receives calls from the PSTN, such as SkypeIn, could not logically expect to have E911 service. It is a common sense proposition that Skype subscribers who only purchase SkypeIn do not do so as replacements for conventional telephone service and, accordingly, would not reasonably expect to have E911 access.¹²

Moreover, if consumers do not expect to have E911 service from either SkypeIn or SkypeOut independently, they will also not expect to have E911 service if they happen to purchase both SkypeIn and SkypeOut credits at the same time. As explained in greater detail in its Skype's initial comments, Skype users purchase SkypeIn and SkypeOut credits separately and independently and, at any given time, may not be aware whether their service is active at given time.¹³ Accordingly, the Commission should not adopt its tentative conclusion that separate "one-way" VoIP service offerings that can be combined by the user or used "simultaneously or in immediate succession" should be subject to the E911 rules. It is extremely unlikely that such service offerings will be used as a replacement for traditional telephone service, and subjecting them to E911 requirements will be contrary to consumer expectations and will only lead to consumer confusion.

B. The Record Demonstrates That Viable Technical Solutions Do Not Exist For Requiring Automatic Location Information in VoIP Equipment

Although a handful of commenters support the proposal to require the capability to provide automatic location information in VoIP-related equipment, no such supporter demonstrates that viable solutions could, in fact, be implemented before the

¹¹ See, e.g., NENA Comments at 10 (recognizing that VoIP services that only allow calls to be received from the PSTN without enabling calls to made to the PSTN need not have E911 capability); Boulder Regional Comments at 5.

¹² See, e.g., AT&T Comments at 6; United Online Comments at 3-8.

¹³ Skype Comments at 5-10.

Commission's proposed June 2006 deadline. The companies closest to developing hardware necessary for E911 service conclude that this deadline is unrealistic.¹⁴ This confirms Skype's view that the technological standards for a next generation E911 capability are evolving and that the FCC should not mandate the use of any specific technology at this time.¹⁵

Instead, the weight of the comments urge the FCC to allow active, combined industry efforts to fashion technology-based solutions to the problem of nomadic VoIP services.¹⁶ As discussed in our initial comments, Skype believes that inaccurate 911 location information is worse than no location information. Without a reliable technological solution, the possibilities of erroneous dispatches are great.¹⁷ Erroneous dispatches impose significant costs on local first responders and work to endanger those in distress. Before proceeding to expand existing E911 requirements, the FCC should be careful to avoid this result.

III. THE STATE AND PUBLIC SAFETY ROLE SHOULD BE FOCUSED ON DELIVERY OF COOPERATIVE FUNDING SOLUTIONS FOR E911 INTERFACES

The comments in this proceeding lay bare what FCC officials already know: the transition to a next-generation emergency services network presents a significant

¹⁴ See, e.g., Comments of Cisco Systems, Inc. at 9-10 (Aug. 15, 2005); Comments of Information Technology Industry Council at 6-7 (Aug. 15, 2005); Comments of Motorola, Inc. at 2 (Aug. 15, 2005); Verizon Comments at 3-4; Comments of Vonage America, Inc. at 7 (Aug. 15, 2005); see also NENA Comments at 9; Comments of Texas 9-1-1 Alliance at 19 (Aug. 15, 2005).

¹⁵ See, e.g., Comments of CTIA at 7-8 (Aug. 15, 2005) ("CTIA Comments"); Comments of iPosi, Inc. at 9 (Aug. 15, 2005); NASUCA Comments at 13; SBC Comments at 9-10; Time Warner Comments at 9; USTA Comments at 2.

¹⁶ See, e.g., BellSouth Comments at 6; CTIA Comments at 7-8; Comments of New Jersey Board of Public Utilities at 5-6 (Aug. 15, 2005); Qwest Comments at 5-8; SBC Comments at 6-7; Time Warner Comments at 9; United Online Comments at 11; USTA Comments at 3-4.

¹⁷ As the VON Coalition notes, the CMRS proceeding demonstrates that imposing a static solution in a dynamic technological environment can lead to implementation difficulties. See Comments of VON Coalition at 13 (Aug. 15, 2005). See also AT&T Comments at 7; CTIA Comments at 7-8; Comments of Earthlink, Inc. at 3 (Aug. 15, 2005).

financial challenge, particularly for resource-constrained public safety officials. Skype fully appreciates the challenges that APCO and other members of the public safety community face operating current E911 systems, much less upgrading functionality to a next-generation emergency services network.

However, the issue is not, as some have suggested, reluctance in the VoIP community to accommodate the needs of public safety officials.¹⁸ Rather, Skype has urged the FCC to not require changes to software-defined services that will create few if any public safety benefits.¹⁹ Network investment in next-generation emergency services infrastructure will be stranded if the Commission does not also ensure that public safety officials have the necessary resources to upgrade their part of the investment equation. In the end, the scarcity of funding makes it all the more important for the FCC to not require duplicative spending and counsels against retro-fitting Skype services into the current E911 network.

The funding for E911 is provided by tax payers, either directly through state and local taxes or more indirectly through 911 fees. IP technology (and the emergence of presence applications — IM networks with voice, video, and data) can revolutionize our emergency response capabilities, particularly in times of public crisis. Where such a system generates broad public goods, taxpayers and consumers will reasonably expect that these monies will be spent on capabilities that move the nation's emergency response

¹⁸ See Association of Public-Safety Communications Officials International, Call to Action (Sep. 1, 2005), *available at* http://www.apcointl.org/about/gov/alerts/FCC_Docket_05-196.htm.

¹⁹ Skype Comments at 10.

capability forward.²⁰ Thus policymakers should develop a funding mechanism that directs resources toward improving the national E911 infrastructure.

IV. THE COMMISSION CAN HAVE CONFIDENCE THAT THE INDUSTRY IS MOVING TO DEVELOP TECHNOLOGIES FOR A NEXT GENERATION IP E911 SYSTEM

As commenters have pointed out, the standards for nomadic E911 services are moving forward.²¹ In the area of VoIP delivery via WiFi, NENA properly recognized that, while it may be possible for WiFi devices to utilize geodetic information, the background technology to support such applications is not yet clear and may be unlike existing solutions for the mobile wireless industry.²² Thus, it is important for these standardization efforts to develop before the FCC endorses any particular technological solution.

In the meantime, Skype agrees with the Commission that consumers should be empowered with sufficient information to understand whatever limitations are present in a particular VoIP service. As discussed in its initial comments, in various ways, Skype does not position its services as a replacement for primary telephone service. For that reason, Skype has voluntarily instituted a best-practice that is designed to protect our users and their expectations of emergency calling. Consistent with the intent of the FCC's recent *Order* and *Public Notice* on this matter, Skype has voluntarily instituted a

²⁰ In this regard, Skype agrees with NENA that the FCC should not take any action that will prevent states and localities from collecting fees from VoIP service providers so long as that action is consistent with federal law. NENA Comments at 15. At some point the Commission must grapple with the statutory classification of VoIP services and harmonize that definition across the relevant enabling statutes. For example, overbroad categorization of services defined as "interconnected VoIP" for E911 purposes may create litigation risk if those services must also be defined as a "substantial replacement" for local exchange services under CALEA. It strains the CALEA statute to the point of breaking to define a one-way service such as SkypeOut as a "substantial replacement" for traditional local exchange services.

²¹ See NENA Comments at 12 (discussing ongoing efforts of WiFi Forum and WiMax Alliance to develop technical standards).

²² NENA Comments at 12.

program to make clear — at every phase of the Skype user experience — that the Skype software applications and the devices they may be bundled with do not provide access to emergency calling. Skype has included prominent disclaimers of emergency calling capability on marketing material for Skype applications and bundled devices that a consumer sees before he or she purchases a Skype product. After purchase, Skype users must break a seal disclaiming emergency calling capabilities and must *affirmatively* accept Skype’s terms of service which include explicit limitations on emergency calling. Finally, whenever Skype users interact with the website to purchase connections to the PSTN, they are greeted with the disclaimer “Skype is not a telephony replacement service and cannot be used for emergency calling.”

These kinds of best-practices demonstrate that Skype will work cooperatively with regulators to meet user expectations as they evolve. Commission leadership that brings together the various industry and government-led work will be critical to achieving a successful transition to a next-generation network. Through NRIC VII, the federal-state task force on E911 enforcement, the NENA standards-setting process and the various industry-led standards setting bodies, the FCC can deliver clarity and a roadmap for technical solutions in this area.

Fortunately, the Commission has some experience working with nascent industries to deliver E911 functionality. Given the complexities of the solution and the requirement that PSAPs upgrade their facilities, the FCC should pattern its next-generation E911 rules according to a phased deployment schedule like the one adopted by the FCC for the nascent CMRS industry.²³

²³ In establishing a phased E911 deployment schedule for the CMRS industry, the Commission recognized the technical complexity of the task involved and the need not to overly

V. CONCLUSION

The record in this proceeding is clear: the Commission first should assess fully the impact of its current E911 rules before extending new rules to nascent IP-based communications applications such as those provided by Skype. As a leader in software-defined communications applications, Skype is committed to working constructively in this process, seeking harmonization of the FCC's solution with those being considered in other countries, and working toward an E911 system that improves the already fine level of protection public safety officials provide today. The technology is coming for E911 solutions; the FCC should work toward creating the conditions for a next-generation E911 service and should be wary about imposing interim solutions that divert valuable resources away from developing an E911 system that offers a quantum leap in emergency response functionality. If the Commission nonetheless decides that an interim solution is warranted for non-interconnected VoIP services, it should adopt a call center based or "O911" approach for emergency services similar to that offered by interconnected MSS providers.

burden a nascent industry. The Commission first adopted an order requiring CMRS providers to implement E911 service in June, 1996. *Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, RM-8143, Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 18,676 (1996). The phased deployment schedule required of CMRS providers extended over several years, and continues to this day. See Skype Comments at 21 n.31.

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